

Amendments to the Claims:

This listing of the claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A micro-electro-mechanical systems (MEMS) accelerometer comprising a wafer micro-fabricated to provide frame defining an opening, a sensing mass disposed within the opening of the frame ~~and connected to the frame by~~, a pair of aligned pivot beams formed integrally with the frame and mass from the wafer and defining a pivot axis for the mass, the pivot beams being disposed so that the axis of pivoting of the mass with respect to the frame about said pivot axis is displaced from the centre center of gravity of the mass, and at least one sensing beam connecting the mass to the frame and arranged such that pivoting movement of the mass about said pivot axis will distort the sensing beam, whereby pivoting movement of the mass may be detected by sensing the distortion of the sensing beam.
2. (original) A MEMS accelerometer as claimed in claim 1, wherein the mass is connected to the frame by two sensing beams extending from opposed sides of the mass to the frame whereby the sensing beams are distorted in opposite senses upon the mass performing pivoting movement.
3. (currently amended) A MEMS accelerometer as claimed in claim 1 ~~or claim 2~~, wherein the frame, the mass, the pivoting beams and the ~~or each~~ at least one sensing beam are all produced from a single wafer of semiconductor material by micro-electro-mechanical systems techniques.
4. (currently amended) A MEMS accelerometer as claimed in claim 3, wherein the at least one ~~the or each one~~ sensing beam is of ~~or carries~~ a piezo-electric material whereby the distortion ~~thereof~~ of the at least one sensing beam may be detected by determining a change in the electrical characteristics of the ~~or each sensing beam~~ piezo-electric material.

5. (currently amended) A MEMS accelerometer as claimed in ~~any one of claims~~ claim 1 to 3, wherein the ~~or each~~ at least one sensing beam includes implanted or deposited metallic components whereby the distortion of the ~~or each~~ at least one beam may be detected by determining a change in the electrical characteristics thereof.
6. (currently amended) A MEMS accelerometer as claimed in claim 2 ~~or any claim dependent thereon~~, wherein the sensing beams are ~~co-planar~~ co-axial and extend substantially co-linearly in opposite directions away from opposed sides of the mass to the frame.
7. (currently amended) A MEMS accelerometer as claimed in ~~any of the preceding claims~~ claim 1, wherein the mass has the general shape of a cuboid and the sensing beams extend from a face thereof to the frame.
8. (original) A MEMS accelerometer as claimed in claim 7, wherein the pivot beams are disposed substantially centrally of the face from which the beams extend, said pivot axis extending transversely across that face.
9. (currently amended) A MEMS accelerometer as claimed in claim 8, wherein the pivot axis of the pivot beams ~~is at or adjacent to~~ lies in one of (1) within the plane of said face of the mass and (2) adjacent the plane of said face from which the at least one sensing ~~beams extend~~ beam extends.
10. (currently amended) A MEMS accelerometer as claimed in ~~claims 7 to 9~~ claim 7, wherein the at least one sensing ~~beams~~ beam has a substantially rectangular profile, in the plane of the face of the mass from which ~~the beams extend~~ said sensing beam extends.
11. (currently amended) A MEMS accelerometer as claimed in ~~any of the preceding claims~~ claim 1, wherein the ~~or each~~ at least one sensing beam and the pivot beams are substantially co-planar when the accelerometer is at rest.

12. (currently amended) A MEMS accelerometer as claimed in ~~any of the preceding claims~~ claim 1, wherein the frame defines two openings in each of which is provided a similar mass, mounted in the opening by a respective pair of pivot beams and at least one or more respective sensing beams beam.

13. (currently amended) A MEMS accelerometer as claimed in claim 12, wherein the ~~respective pairs of~~ sensing beams of the two masses are substantially co-planar but the respective pairs of pivot beams are substantially orthogonal, whereby the two ~~accelerometers~~ masses sense acceleration in orthogonal directions.

14. (currently amended) A MEMS accelerometer as claimed in claim 12 ~~or claim 13~~, wherein the frame defines a third opening and a third mass is disposed within the third opening, the sensing axis of the third mass being substantially orthogonal to the sensing axes of the first and second masses.

15. (original) A MEMS accelerometer as claimed in claim 14, wherein the third mass is supported on one or more sensing beams.

16. (currently amended) A MEMS accelerometer as claimed in ~~any~~ claim 15, wherein the third mass is supported by four sensing beams extending in two directions orthogonal to each other.

17. (original) A MEMS accelerometer as claimed in claim 16, wherein the third mass has the general shape of a cuboid and the four sensing beams extend respectively from each of the four edges of a face of the third mass to the frame.

18. (original) A MEMS accelerometer as claimed in claim 17, wherein the four sensing beams associated with the third mass are substantially co-planar with the sensing beams of the other two masses.

19. (new) A MEMS accelerometer as claimed in claim 4, wherein the at least one sensing beam carries piezo-electric material whereby the distortion of the at least one

sensing beam may be detected by determining a change in the electrical characteristics of the piezo-electric material.